

HOW DOES YOUR LIBRARY HANDLE ELECTRONIC SERIALS? A GENERAL SURVEY



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This article reports on the findings of a survey conducted during August and September 2001 that investigated how all types of libraries from around the world manage and provide access to electronic serials (eserials). The survey's focus was on the practical aspects of eserials management, but many of the respondents took advantage of open-ended questions to express their views. The quantitative findings of the survey show that there is a diversity of ways in which eserials are being managed, and the qualitative findings suggest that libraries are deeply concerned about the lack of both standards and best practices for managing eserials.

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Introduction

The intention of the current survey was to gather baseline quantitative information on how libraries of all types provide and manage access to eserials, with a particular focus directed to on-the-ground practices and strategies. There are, as discussed, relatively few standardized or 'best' practices in this area, and amongst our respondents, significant frustration with that paucity. This article reports the findings of our survey and highlights areas where further research is warranted.

Terminology associated with this topic can be particularly confusing. Our survey asked questions on all types of electronic serials. We adopted the term 'eserials' and use it to describe all serial literature available in an electronic format. Other common terms are 'e-serials' and 'ejournals'; the latter term may refer to material that would not normally be considered a scholarly journal, but a magazine, newsletter, etc. When discussing other research or writing, we use whatever term was used in the original.

Previous research

The literature on how libraries provide access to electronic serials has been reviewed elsewhere. Rich and Rabine, for example, review the literature until 1999, from pre-Web strategies such as using Gopher menus for organizing links to online journals to the emergence of the World Wide Web as the vehicle of choice for electronic serials in the mid-1990s.¹ The mid-1990s also saw the articulation of problems associated with the metadata aspects of electronic serials and the rise of the use of aggregator services to manage eserials.

A general but thorough overview that postdates Rich and Rabine's survey is that of Lam², which covers all of main areas

addressed in our own survey: acquisitions, licensing, cataloguing, and systems-related issues. Other recent articles that treat specific problems in detail include Hawkins (1999)³ and Knudson *et al.* (1999).⁴

It should be noted that the Charles Bailey's Scholarly Electronic Publishing Bibliography, particularly sections 3.5 and 3.6, is perhaps the most important resource for people tracking the history of, and keeping up with, writing on the topic of electronic serials management.⁵ Also, the serials literature is now paying more systematic attention to these issues; for instance, beginning in 2000, *Serials Librarian* has featured a regular column on eserials entitled 'e-scape: a column about e-serials cataloguing'.

Rich and Rabine's article¹ points out a noticeable lack of information on how libraries are actually providing access to electronic serials. Perhaps motivated by this lack, they report on an inventory of how 114 North American academic libraries provide access to electronic journals via their websites. Among their findings pertinent to the current survey are that the majority of sites inventoried make access to e-journals prominent on the library website (92%), annotate individual titles to some degree (77%), list individual titles alphabetically (74%), provide access to both free and licensed titles (65%), and link to other institutions' e-journal collections (62%). Rich and Rabine also note the emergence of 'low-maintenance' sites that simply link to other institutions' e-journal collections and 'higher maintenance' sites that offer 'a large collection of individually selected e-journals'.

A recent survey by Emily McElroy (2001)⁶ set out to 'gauge the difficulties in managing e-journals'. McElroy's survey is similar to our own in that both sets of respondents were solicited from selected groups of library or serials oriented email lists, and in that both questionnaires were web-based. There is also substantial overlap in quantitative questions between the two surveys, and, as covered in the conclusion, complementary findings. A point of contrast is that McElroy's survey solicited attitudinal responses (of the 'Do you agree ...?' nature) whereas the current survey's concern was with enumerating specific strategies and practices in place at libraries. This is evidenced in McElroy's use of Likert-scale questions seeking

agreement on eight or so statements, such as 'Activation of E-journals Is Easier With an Aggregator Than Going Directly to a Publisher'.

About the survey

The survey was inaugurated in early August 2001 by a posting to various email lists describing, and soliciting participation in, the survey. The survey announcement was sent to the Web4Lib, AUTOCAT, arl-ejournal, PACS-L, serialist, liblicense-l, DIGLIB, ERIL and cnslp-ig email lists. The aim was to collect one completed survey, comprising 37 questions in total, from each of as many libraries around the world as possible. With this in mind, the survey was made accessible, via the web, from early August through to the end of September of 2001. In that two-month period, the survey attracted approximately 220 respondents, drawn from libraries in North America, Europe, Asia, Africa, etc. Of those 220, we restricted our analysis (next section) to the 194 responses that provided answers to at least two primary questions, namely question 1 (country) and question 2 (library type). Of those 194, 166 included email addresses.

Conducting a web-based survey, we were beset by a number of design criteria that are difficult to accommodate within a conventional HTML framework. Conceived as an environmental scan rather than a survey instrument that adheres to statistically valid sampling methods, the instrument was also designed to elicit accurate and thoughtful responses from those who did participate. Therefore, we thought it beneficial to provide respondents with the opportunity to login as many times as required during the two months of August and September 2001, when the survey was running. Further, we wanted to expedite easy access to the questions while also protecting confidentiality. The survey application would, the authors decided, also need to support additional error logic to mitigate the entry of incorrectly formatted responses, and would need to be robust enough stand up to multiple, concurrent respondents. The technical challenges were ones that the authors concluded would be met most efficiently by utilizing a back-end and 'middle-tier' software that could 'serve up' a secure and browser-friendly web survey. In the

anticipation that eserials management often involves staff from different divisions (a point corroborated in the survey), we wanted to encourage collaboration between colleagues where applicable. As a cursory glance at the web logs suggests, a number of respondents did log in on multiple occasions to complete the survey. We do not read too much into this, but it seems possible that some of these respondents did indeed expend more effort to supply accurate information and/or collaborate with their peers.

The primary technical challenge in the survey design lay in designing a respondent 'account' system that could both facilitate collaboration and preserve the integrity of 'master' responses. After considering various prototypes, the authors implemented a system that prevented concurrent logins by more than one colleague from the same institution. The first to log in from a given institution would create a 'session' that prevented other subsequent logins for a given time period. Subsequent attempts to log in during that session by the respondent's colleagues would be met with a brief message informing them of the session status and an invitation to try again shortly. (Sessions were cleared as respondents logged out and automatically cleared after 60 minutes of inactivity by a logged in respondent.) A wide range of applications can be utilized to develop web applications with the criteria above. The authors selected Microsoft SQL Server for the database backend and Cold Fusion as the middle-tier application server.

Supplemental to the account/login system above, we used the email announcement to

propose that multiple respondents from one institution consider delegating one person – perhaps the staff member most directly responsible for managing eserial collections – to coordinate responses and collaboration. One risk, particularly at larger, multi-campus institutions or those with loosely coordinated staffing responsibilities, was that colleagues might establish multiple responses independent of each other. In the end, as suggested by the web logs, this was not the case; respondents appeared very good at coordinating responses.

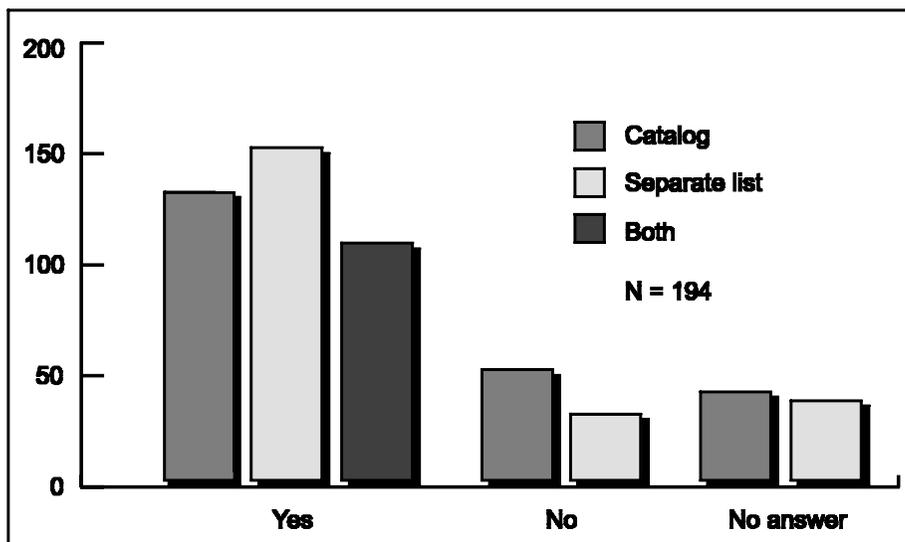
To encourage participation, the survey entry page included a notice to the effect that respondents' confidentiality was paramount, and that account information would not be utilized for any purposes beyond that of the survey itself. As a further inducement, potential respondents were offered the opportunity to receive preliminary reports comparing their responses against reports depicting the aggregated responses of other like institutions. Anonymous responses were not included in the aggregated survey reports unless the respondent had responded to a base number of questions.

Quantitative themes

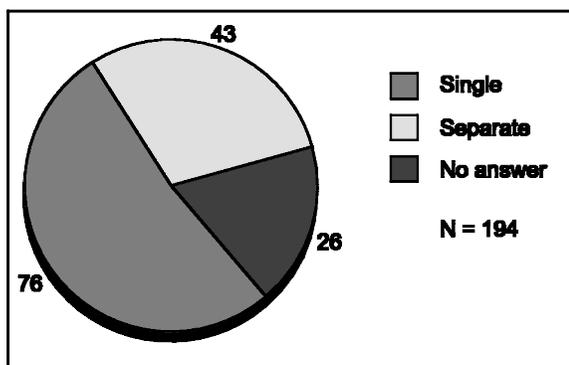
The 194 'valid' respondents represented libraries from more than 20 countries. In all, 139 academic libraries, five public, 11 special (not for profit), and 39 special (for profit) libraries completed the survey.

One area that our survey addressed was the technicalities of eserials management. As the

adjoining chart illustrates, among our respondents, libraries are providing access to eserials via lists outside their standard library catalogue slightly more frequently than via their catalogue, and the majority of libraries are providing access using both methods.



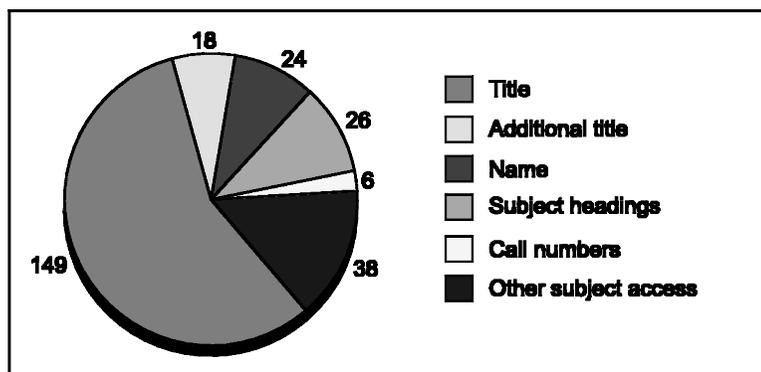
Of the 119 libraries responding to our question about whether they use a single bibliographic record for both a print and an electronic version where applicable, or a separate record for each version, the single-record libraries outnumber the separate-record libraries almost two to one.



Of our respondents, 89 libraries responded to our question on CONSER⁷ compliance (this question was limited to those libraries who indicated they provided access in their standard catalogue). Of these libraries, 45% said they always follow CONSER guidelines, 37% said they sometimes do, and 18% said they never do.

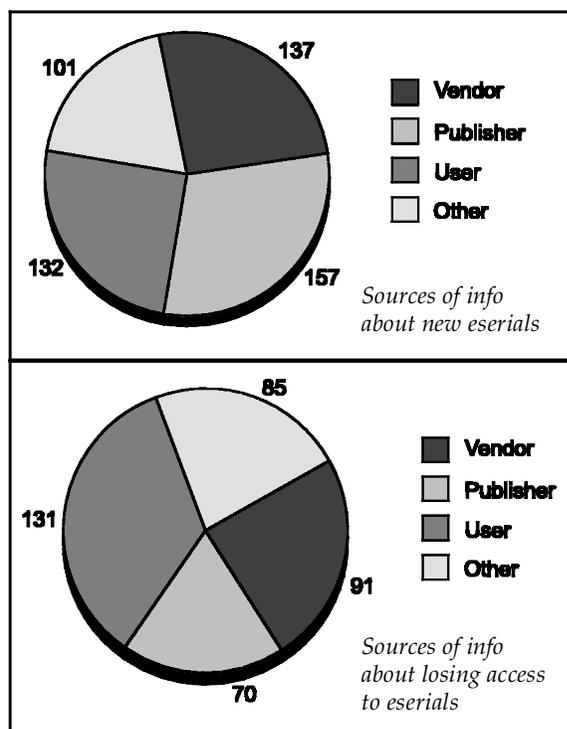
We collected details about the methods libraries use to provide access to eserials outside their standard catalogue; 38.5% of the 151 libraries who responded to this question indicated that they use a database-driven approach to managing these lists, 36.4% reported that they use static (i.e., hand-maintained) HTML pages, and 25.1% reported that they used some other technology. The most common access points that libraries are providing in these lists are title and what we operationalized as 'other subject access' ('other' in the sense that we also operationalized subject headings and call numbers); a breakdown of the responses is represented in the following chart:

The most common types of non-access point



information provided in eserials records (either in the catalogue or in a separate list) were extent of the full text (included 50% of the time) and links to other versions of the same title (29%). Surprisingly few (5%) reported including information on licensing information.

Another aspect of eserials management that we were interested in exploring was how libraries track what titles they have access to. In other words, how do libraries find out about electronic titles that become available to them and how do they find out about titles that they lose access to. Interestingly, libraries reported that publishers are both the most common source of information about new titles and the least common source of notification that a library has lost access. Another pattern was that library users are a very common source of both types of information. The following two charts illustrate these patterns:



When asked if they had any automated or systematic mechanisms for tracking the expiry dates of eserials, 27% of all libraries who responded to our survey reported that they did have such a mechanism, and 48% responded that they did not; 25% of responding libraries did not answer this question.

Of the 156 that responded, 103

libraries noted that they always or sometimes negotiate changes to licences. A broad range of types of changes was recorded in the accompanying open-ended question (see next section).

A significant number of libraries, 149 of 194, reported licensing eserials through consortial arrangements. For those 149 libraries, the average percentage of eserials holdings licensed through consortia was reported as 53%.

Qualitative themes

While the primary stated intention of the survey had been to capture baseline quantitative information (previous section), open-ended questions were also included to elicit more in-depth and/or discursive responses.

Two pervasive, overarching themes concerned the amount of work needed to manage eserial collections, and the lack of, or failure to adhere to, 'standards' and/or 'best practices'. The precise relationship could be better explored in future research, but certainly the responses seemed to point to a correlation between workflow efficiencies and adherence to standards. In addition to concern over the amount of work, the complex nature of managing eserials was also prevalent in the minds of many respondents. Many felt that the complexity is getting more pronounced as new challenges arise and practical solutions fail to materialize.

A number of responses took publishers and vendors to task for not following accepted or *de facto* practices, e.g., in the provision of consistent and usable title lists, in communicating changes to collections, or in updating library management systems with functional enhancements required to better manage emerging formats. As one respondent put it, publishers and vendors '...should be enthusiastically encouraged to provide either MARC records or at least files containing at minimum the title, url, issn and holdings'. Another proposed that:

'...If all vendors/database aggregators would provide comma-delimited lists of their title holdings with a standard date format, it would be easier to maintain the information in the catalog. Also, it becomes very difficult to track cancellations of journals from vendors when title holdings are not posted on a monthly basis'.

Content providers were also held accountable for introducing too many idiosyncratic factors in the licensing process. Highly restrictive clauses – e.g., with respect to usage rights (including narrow definitions of walk-in users) and those that contravened jurisdictional laws – were perceived to be particularly counter-productive. One particularly frustrated respondent (from a special library) suggested:

'The licensing agreements are out of control. Completely different for each e-serial, and more difficult because we try and serve an international community that is located in seven sites and trying to determine their eligibility to access the journals is often difficult. We recently got a message from a major Health journal asking us to send them five IP addresses that could have access to the journal. I don't know what they are thinking since nothing is static here'.

There was some frustration with outdated and/or limited library management systems. Specifically, the cataloguing modules of these systems do not easily allow entry of additional information, such as availability of eserial, format information, details concerning multiple versions of the same title and so on. These limitations have led some libraries down the path of implementing adjuncts to the standard library catalogue, whether in the form of static web-pages that list ejournals subscribed to, or more complex dynamic pages with relational database back-ends. In many cases, these are developed to work in conjunction with or draw on existing open-source applications (e.g., the Jake title list), but other respondents reported that they had licensed, or were considering, third-party solutions (such as Serials Solutions). Others raised the possibility of 'international' or consortial approaches to help alleviate technical limitations and staffing burdens.

A number of respondents also spoke about the increased burden that eserials management imposes on staff. As described by one respondent,

'This is in a rapid state of flux. It is extremely difficult to maintain any equilibrium in staffing or workflow. From one day to the next workloads are changing and unpredictable'.

Compared with print serials, eserials management generally (according to various respondents) requires a more diverse, and sometimes *ad hoc*, staff contingency – e.g., those

with expertise in format integration, web management, licensing of electronic content, cataloguing, and other areas. Mentioned by a number of respondents was the necessity of appropriate new skills to deal with eserials. A number also mentioned having observed in their libraries the formation of new positions and cross-divisional teams to deal with eserials. This point finds corroboration in the survey question that asked respondents to list all the staff involved in eserials management – too many to list here – and is an area that deserves more attention.

Conclusion

As enumerated in the quantitative and qualitative sections above, there exists a diversity of procedures for managing eserials. Conversely, there are relatively few standardized or best practices in this area, a point of frustration for many in the library community. Content providers who do a good job in providing usable and current title lists, as well as in communicating changes to the nature of their collections, are likely to be viewed more favorably, particularly where de facto or recognized standards emerge in these areas. Libraries themselves can take an active role in helping shape such standards, if only through more effective information sharing – within their own community and with vendors. Certainly, there seemed to be a thirst amongst our respondents for seeing how other libraries were dealing with eserial collections, suggesting that libraries are

still struggling to develop practical, useful strategies for managing eserials. For example, at a conference where a preliminary version of this report was presented, several vendors asked for results; within the first week of reports being available, 25% of respondents logged in to view them.

References

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